

Water Properties Group

Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2016-17

Station: W0-1

Event #: 1

Ship: SWL

UTC Date (dd|mm|yyyy): 03 Jul 2016

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken					Prods				Comments	
		Flask Serial #	Value mL • L ⁻¹	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Chl a	NH ₄	prod	Phy	TD	Oxy 2 Temp		
1	1	1174	1134	1000	✓ 1005	X	X	X						5.5	6.0	Bubbles in 1174
2	2	1142	1177	750	✓ 751.2	X	X	X	X					5.8	6.0	
3	3	1121	1094	500	✓ 501.8	X	X	X	X					6.4	6.6	
4	4	1150	1188	350	✓ 353	X	X	X	X					6.7	7.0	
5	5	1180	1192	250	✓ 259.6	X	X	X	X					7.5	7.7	
6	6	1106	1119	225	✓ 226.3	X	X	X	X					7.8	8.0	
7	7	1141	1158	200	✓ 200	X	X	X	X					8.1	8.5	
8	8	1146	1123	175	✓ 175	X	X	X	X					8.3	8.5	
9	9	1153	1138	150	✓ 151	X	X	X	X	X				8.7	8.9	
10	10	1105	1110	125	✓ 125	X	X	X	X	X				8.9	9.1	
11	11	1128	1144	100	✓ 99.2	X	X	X	X	X				9.3	9.4	
12	12	1114	1136	75	✓ 79.8	X	X	X	X	X				9.6	9.6	
13	13	1182	1178	50	✓ 50											
14	14	1182	1178	50	✓ 50	X	X	X	X	X				10.0	10.1	
15	15			35	✓ 35									10.5		
16	16	1126	1189	35	✓ 35	X	X	X	X	X				10.6	10.7	
17	17			30	✓ 30.5						X					
18	18	1130	1124	25	✓ 25.5	X	X	X	X	X				11.7	11.8	
19	19	119		15	✓ 14.8						X					
20	20	1085	3196	15	✓ 14.8	X	X	X	X	X				13.6	13.7	
21	21			5	✓ 5						X					
22	22	3204	3182	5	✓ 5	X	X	X	X	X				13.7	13.8	top vent not closed enough
23	23			0	✓ 23						X					
24	24			0	✓ 23						X					

Watchkeeper(s): SV/DW/SE

Bottom Depth: ~2000 m

Transmisso Cleaned: Y / N

Time		UTC	Local
Start		1512	0812
Bottom		1532	0832
End		1609	0909

Positional Information

Start

Lat: 49 ° 41.141 N

Lon: 128 ° 24.174 W

Bottom

Lat: 49 ° 41.110 N

Lon: 128 ° 23.800 W

End

Lat: 49 ° 41.198 N

Lon: 128 ° 20.380 W

Oxygen Info For This Cast

Blank Value: _____ mL • L⁻¹

Std Value: _____ mL • L⁻¹

*Date Run: ____ | ____ | ____

Analyst: _____

* Oxygen blanks and standards should be run daily, if possible

Water Properties Group

Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2016-17 Station: NP-2 Event #: 104 Ship: SWL UTC Date (dd|mm|yyyy): 07 | Jul | 2016

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken					Comments	
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Chl a	NH ₄	Oxy1 temp	Oxy2 temp
1	25	1085		1000	✓ 1000	X	X	X			4.7	
2	26	3196 3204		750	✓ 779	X	X	X			5.2	5.6
3	27	3182		500	✓ 500	X	X	X			5.9	
4	28	3178		350	✓ 344	X	X	X			6.4	
5	29	3151		250	✓ 250	X	X	X			7.0	
6	30	3171		225	✓ 225	X	X	X			7.1	
7	31	3177		200	✓ 200	X	X	X			7.6	
8	32	3188 3181		175	✓ 175	X	X	X			7.9	8.1
9	33	3166		150	✓ 149	X	X	X			8.4	
10	34	3207		125	✓ 125	X	X	X			8.3	
11	35	3184		100	✓ 99	X	X	X			8.8	
12	36	3189		75	✓ 75	X	X	X			9.5	
13	37	3187		50	✓ 49	X	X	X			10.9	
14	38	3160		35	✓ 35	X	X	X			12.5	
15	39	3157		25	✓ 24	X	X	X			14.2	
16	40	3174		15	✓ 14	X	X	X			14.2	
17	41	1443		5	✓ 5	X	X	X			14.3	
18												
19												
20												
21												
22												
23												
24												

Watchkeeper(s):
SW, SZ, OW

Bottom Depth: 2180 m
Transmisso Cleaned: (Y) / N

Time		UTC	Local
Start		01:09	
Bottom		01:28	
End		01:55	

Positional Information
Start
Lat: 50 ° 9.300 N
Lon: 130 ° 2.072 W

Bottom
Lat: 50 ° 9.370 N
Lon: 130 ° 1.768 W

End
Lat: 50 ° 9.460 N
Lon: 130 ° 1.210 W

Oxygen Info For This Cast
Blank Value: _____ mL · L⁻¹
Std Value: _____ mL · L⁻¹
*Date Run: _____
Analyst: _____
* Oxygen blanks and standards should be run daily, if possible

Water Properties Group

Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2016-17 Station: NP-3 Event #: 6 Ship: SWC UTC Date (dd|mm|yyyy): 4 | 7 | 2016

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken				Comments				
		Flask Serial #	Value mL • L ⁻¹	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Chl a	NH ₄	Dic / Alk	Oxy 1 temp	Oxy 2 temp	CTD / Al. # 3
1	42	1174		1000	✓ 1001	X	XX	X			X	4.6		
2	43	1134		750	✓ 751	X	XX	X				4.9		
3	44	1142 1177		500	✓ 502	XX	XX	X			XX	5.5	5.7	
4	45	1127		350	✓ 350	X	XX	XX				5.8		
5	46	1094		250	✓ 275	X	XX	X			X	6.4		
6	47	1150		225	✓ 229	X	XX	X				6.7		
7	48	1188		200	✓ 230	X	XX	X			X	7.2		
8	49	1180		175	✓ 175	X	XX	XX				7.6		
9	50	1192		150	✓ 150	X	XX	X			X	7.8		
10	51	1106 1119		125	✓ 126	XX	XX	X				8.4	8.6	
11	52	1141		100	✓ 100	X	XX	X			X	8.7		
12	53	1158		75	✓ 75	X	XX	X	XX			9.2		
13	54	1146		50	✓ 51	X	XX	X	XX		X	9.9		
14	55	1123		35	✓ 35	X	XX	X	XX			10.5		
15	56	1153		25	✓ 26	X	XX	X	XX		X	13.0		
16	57	1138		15	✓ 15	X	XX	X	XX			13.0		
17	58	1105		5	✓ 5	X	XX	X	XX		X	13.2		
18														
19														
20														
21														
22														
23														
24														

Watchkeeper(s): SV, SZ, DW

Bottom Depth: 2180 m
Transmisso Cleaned: (Y) / N

Time		UTC	Local
Start		1513	
Bottom		1532	
End		1559	

Positional Information
Start
Lat: 50 ° 56.040 N
Lon: 132 ° 54.900 W

Bottom
Lat: 50 ° 56.050 N
Lon: 132 ° 54.564 W

End
Lat: 50 ° 56.070 N
Lon: 132 ° 54.160 W

Oxygen Info For This Cast
Blank Value: _____ mL • L⁻¹
Std Value: _____ mL • L⁻¹
*Date Run: _____
Analyst: _____
*Oxygen blanks and standards should be run daily, if possible

Water Properties Group

Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2016-17

Station: NP-4

Event #: 11

Ship: SWC

UTC Date (dd/mm/yyyy): 5 Jul 2016

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken					Comments	
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Chl a	NH ₄	Oxy1 temp	Oxy2 temp
1	59	1085396		1000	✓ 1000	X	X	X			4.7	4.9
2	60	3204		750	✓ 750	X	X	X			5.1	
3	61	3182		500	✓ 500	X	X	X			5.6	
4	62	31783151		350	✓ 350	X	X	X			5.9	6.0
5	63	3171		250	✓ 250	X	X	X			6.7	
6	64	3177		225	✓ 225	X	X	X			7.0	
7	65	3188		200	✓ 200	X	X	X			7.4	
8	66	31813166		175	✓ 175	X	X	X			7.8	7.8
9	67	3207		150	✓ 149	X	X	X			8.1	
10	68	3184		125	✓ 125	X	X	X			8.5	
11	69	3189		100	✓ 100	X	X	X			8.7	
12	70	3187		75	✓ 76	X	X	X			9.2	
13	71	3160		50	✓ 50	X	X	X			9.9	
14	72	3157		35	✓ 35	X	X	X			10.6	
15	73	3174		25	✓ 25	X	X	X			12.1	
16	74	1443		15	✓ 15	X	X	X			12.4	
17	75	1434		5	✓ 5	X	X	X			12.6	
18												
19												
20												
21												
22												
23												
24												

Watchkeeper(s):

Bottom Depth: 3450 m

Transmissio Cleaned: (Y) / N

Time UTC Local

Start 01:03

Bottom 01:25

End 01:49

Positional Information

Start

Lat: 51 ° 28.650 N

Lon: 135 ° 6.818 W

Bottom

Lat: 51 ° 28.810 N

Lon: 135 ° 6.670 W

End

Lat: 51 ° 28.999 N

Lon: 135 ° 6.520 W

Oxygen Info For This Cast

Blank Value: mL · L⁻¹

Std Value: mL · L⁻¹

Date Run: | |

Analyst: | |

* Oxygen blanks and standards should be run daily, if possible

Water Properties Group

Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2016-17

Station: NP-5

Event #: 15

Ship: Seve

UTC Date (dd/mm/yyyy): 5 | 302 | 2016

Niskin #	Sample #	Oxygen Titrations		Rosette Operation Target Pressure	Rosette Operation Confirmed Pressure		Samples Taken			Chl a	NH ₄	pH		Oxy1 temp	Oxy2 temp	Comments
		Flask Serial #	Value mL · L ⁻¹		Pressure	Pressure	Oxy	Nut	Sal			P _{tot} 1	P _{tot} 2			
1	76	1174	1134	✓	1000	1001	X	X	X					4.7	5.2	
2	77	1142		✓	750	753	X	X	X					5.4		
3	78	1177		✓	500	500	X	X	X					5.8		
4	79	1127		✓	250	253	X	X	X					5.9		
5	80	1094	1150	✓	250	253	X	X	X					6.5	6.7	
6	81	1188		✓	225	225	X	X	X					6.7		
7	82	1180		✓	200	202	X	X	X					6.8		
8	83	1192		✓	175	176	X	X	X					7.1		
9	84	1106		✓	150	151	X	X	X					7.5		
10	85	1119	1141	✓	125	125	X	X	X					7.7	7.8	
11	86	1158		✓	100	100	X	X	X					8.3		
12	87	1146		✓	75	75	X	X	X					8.6		
13	88			✓	70	70						X				
14	89	1123		✓	50	50	X	X	X					9.2		
15	90	1153		✓	35	35	X	X	X					10.2		
16	91			✓	35	35						X				
17	92	1138		✓	25	25	X	X	X					10.7		
18	93			✓	24	24						X				
19	94	1105		✓	15	15	X	X	X					12.3		
20	95			✓	15	15						X				
21	96			✓	9	9						X				
22	97	1110		✓	5	5	X	X	X					12.3		bottle slow leak with vent head to check
23	98			✓	0	0						X				
24	99			✓	0	0						X				

Watchkeeper(s): Seve

Bottom Depth: 3580 m
Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	15:02	
Bottom	15:23	
End	16:00	

Positional Information

Start

Lat: 52 ° 12.500 N
Lon: 138 ° 44.303 W

Bottom

Lat: 52 ° 12.750 N
Lon: 138 ° 44.170 W

End

Lat: 52 ° 13.154 N
Lon: 138 ° 43.909 W

Oxygen Info For This Cast

Blank Value: mL · L⁻¹

Std Value: mL · L⁻¹

*Date Run: | |

Analyst: | |

*Oxygen blanks and standards should be run daily, if possible

Water Properties Group

Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2016-17

Station: NP-6

Event #: 18

Ship: Seac

UTC Date (dd|mm|yyyy): 6 | Jul | 2016

Niskin #	Sample #	Oxygen Titrations		Rosette Operation Target Pressure	Operation Confirmed Pressure		Samples Taken					Comments	
		Flask Serial #	Value mL · L ⁻¹		✓	Pressure	Oxy	Nut	Sal	Chl a	NH ₄		
1	100	3196		✓ 1000	✓ 1001		X	X	X			X	xxx
2	101	3204		750	750		X	X	X			X	xxx
3	102	3182		500	✓ 495		X	X	X			X	xxx
4	103	3178		350	✓ 351		X	X	X			X	xxx
5	104	3151 3171		250	✓ 252		X	X	X				
6	105	3147		225	✓ 225		X	X	X				
7	106	3180		200	✓ 200		X	X	X				
8	107	3181		175	✓ 176		X	X	X				
9	108	1352		150	✓ 149		X	X	X				
10	109	3204 3184		125	✓ 125		X	X	X				
11	110	3189		100	✓ 101		X	X	X			X	xxx
12	111	3187		75	✓ 75		X	X	X				
13	112	3160 3206		50	✓ 50		X	X	X			X	xxx
14	113	3157		35	✓ 35		X	X	X				
15	114	3174 14280		25	✓ 25		X	X	X				
16	115	1443		15	✓ 15		X	X	X				
17	116	1434 1413		5	✓ 5		X	X	X			X	xxx
18													
19													
20													
21													
22													
23													
24													

Watchkeeper(s):

Bottom Depth: 2720 m

Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	0107	
Bottom	0127	
End	0159	

Positional Information

Lat: 52 ° 39.244 N
Lon: 171 ° 10.697 W

Lat: 52 ° 39.290 N
Lon: 171 ° 10.703 W

Lat: 52 ° 39.370 N
Lon: 171 ° 9.894 W

Oxygen Info For This Cast

Blank Value: mL · L⁻¹
Std Value: mL · L⁻¹
*Date Run: | |
Analyst: | |
*Oxygen blanks and standards should be run daily, if possible

Rosette Log for IOS Cruise ID 2016-17 Ship: CCGS Sir Wilfrid Laurier

Event # 46 UTC Date (admmmyy) 13 JUL 2016 Ice Coverage 0/10 Water Depth(Sounder) 81 m 4/6m ship draft

Station: SLIP-2 UTC Time 00:42 Weather/Sea State Calm Sea, No wind Sound Speed used by Sounder

CTD File: 201617-0046 Lat (N) 62 3.157 Lon (W) 175 12.726 Watchkeeper(s) SV/SE/DW

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	T = -1.566 } 13.44 - 12.64 S = 271.903 Comments
251	8.5	7.7	1		X			X	X	X	X	X	X	X	X	1	X	X	X	X			
252	7.5	7.0	2					X	X	X	X	X	X		X	2	X	X	X	X			
253	5.0	5.0	3					X	X	X	X	X	X	X	X	3	X	X	X	X			
254	3.5	3.0	4					X	X	X	X	X	X	X	X	4	X	X	X	X			
255	2.5	2.0	5					X	X	X	X	X	X	X	X	5	X	X	X	X			
256	1.5	1.0	6					X	X	X	X	X	X	X	X	6	X	X	X	X			
257	5	5	7		X			X	X	X	X	X	X	X	X	7	X	X	X	X			
			8													8							
			9													9							
			10													10							
			11													11							
			12													12							
			13													13							
			14													14							
			15													15							
			16													16							
			17													17							
			18													18							
			19													19							
			20													20							
			21													21							
			22													22							
			23													23							
			24													24							

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17 Ship: CCGS Sir Wilfrid Laurier

Event # 52 UTC Date (ddmmmyyy) 13-Jul-2016 Ice Coverage 0/10 Water Depth(Sounder) 72 m +6m ship draft

Station: SL1P-3 UTC Time 05:30 Weather/Sea State S-S calm N. wind. Sound Speed used by Sounder

CTD File: 201617-0052 Lat (N) 62° 23.3' Lon (W) 174° 34.230' Watchkeeper(s) 50/52, DW

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Comments
258	13-5	67	✓1			X	X			X	X	X	X	X		1							T2 - 1.524
259	13-5	67	✓2					X	X					X	X	2	X	X	X	X			S2 31.897
260	50	50	✓3			X	X			X	X	X	X			3							
261	50	50	✓4					X	X		X			X	X	4	X	X	X	X			
262	35	25	✓5			X	X			X	X	X	X			5							
263	35	35	✓6					X	X		X			X	X	6	X	X	X	X			
264	25	25	✓7			X	X			X	X	X	X			7							
265	25	25	✓8					X	X					X	X	8	X	X	X	X			
266	15	15	✓9			X	X			X	X	X	X			9							
267	15	15	✓10					X	X		X			X	X	10	X	X	X	X			
268	5	5	✓11			X	X			X	X	X	X			11							
269	5	5	✓12					X	X					X	X	12	X	X	X	X			
			13													13							
			14													14							
			15													15							
			16													16							
			17													17							
			18													18							
			19													19							
			20													20							
			21													21							
			22													22							
			23													23							
			24													24							

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17 Ship: CCGS Sir Wilfrid Laurier

Event # 58 UTC Date (ddmmmyy) 13 JUL 2016 Ice Coverage 0/10 Water Depth(Sounder) 67 m + 6m ship draft

Station: 521P-5 UTC Time 10:24 Weather/Sea State Calm, no wind Sound Speed used by Sounder

CTD File: 201617-0058 Lat (N) 62 33.630 Lon (W) 173 32.950 Watchkeeper(s)

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	T2-1.476 @ 62m S2 31.965 Comments
270	8-5	6.2	✓1			X	X	X	X	X	X	X	X	X	X	1	X	X	X	X			
271	8-5	6.2	✓2					X	X	X	X	X	X	X	X	2	X	X	X	X			
272	50	50	✓3			X	X									3							
273	50	50	✓4					X	X	X	X	X	X	X	X	4	X	X	X	X			
274	35	35	✓5			X	X									5							
275	35	35	✓6					X	X	X	X	X	X	X	X	6	X	X	X	X		X	
276	25	25	✓7			X	X									7							
277	25	25	✓8					X	X	X	X	X	X	X	X	8	X	X	X	X			
278	15	15	✓9			X	X									9							
279	15	15	✓10					X	X	X	X	X	X	X	X	10	X	X	X	X			
280	5	5	✓11			X	X									11							
281	5	5	✓12					X	X	X	X	X	X	X	X	12	X	X	X	X			
			13													13							
			14													14							
			15													15							
			16													16							
			17													17							
			18													18							
			19													19							
			20													20							
			21													21							
			22													22							
			23													23							
			24													24							

Bottle integrity: First test lower portcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17 Ship: CCGS Sir Wilfrid Laurier

Event # 64 UTC Date (ddmmYYYY) 12 JUL 2016 Ice Coverage 0/10 Water Depth(Sounder) 72 m ~~46m~~ ship draft

Station: SL19-4 UTC Time 1503 Weather/Sea State Chm 5245 W 1120 Sound Speed used by Sounder 1500 (?)

CTD File: 201617-0064 Lat (N) 63° 1.782 Lon (W) 173° 27.523 Watchkeeper(s) SL/DWL/SLZ

CECOP

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Comments
282	B-5	67	V1			X	X									1							12 -1.580 @ 67m
283	B-5	67	V2		X			X	X	X	X	X	X	X	X	2	X	X	X	X			52 32.460
284	B-5	67	V3													3					X		
285	53	53	V4													4							
286	50	50	V5			X	X									5							
287	50	50	V6					X	X	X	X	X	X	X	X	6	X	X	X	X			
288	50	50	V7													7							
289	50	50	V8													8							
290	35	35	V9			X	X									9							
291	35	35	V10					X	X	X	X	X	X	X	X	10	X	X	X	X			
292	35	35	V11													11							
293	32	32	V12													12					X		
294	25	25	V13			X	X									13							
295	25	25	V14					X	X	X	X	X	X	X	X	14	X	X	X	X			
296	25	25	V15													15							
297	22	22	V16													16					X		
298	15	15	V17			X	X									17							
299	15	15	V18							X	X	X	X	X	X	18	X	X	X	X			
300	15	15	V19													19							
301	8	8	V20													20					X		
302	5	5	V21			X	X									21							
303	5	5	V22		X			X	X	X	X	X	X	X	X	22	X	X	X	X			
304	0	0	V23													23					X		
305	0	0	V24													24					X		

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17

Ship: CCGS Sir Wilfrid Laurier

Event # 71

UTC Date (ddmmmyy) 13 Jul 2016

Ice Coverage 0/10

Water Depth(Sounder) 55 m ~~60~~ ship draft

Station: BCL-6A

UTC Time 22:56

Weather/Sea State Cal-Sea Light wind

Sound Speed used by Sounder

CTD File: 201617-0071

Lat (N) 63° 55.318

Lon (W) 172° 5.858

Watchkeeper(s)

Note!
Dred with 0.5 m/s
Ascer with 0.5 m/s

T₂ - 0.798 @ 50m
S = 02.348

Comments

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	
306	B-5	50	1/1			X	X									1							
307	B-5	50	1/2		X			X	X	X	X	X	X	X	X	2	X	X	X	X			
308	35	35	1/3			X	X									3							
309	35	35	1/4					X	X	X	X	X	X	X	X	4	X	X	X	X			
310	25	25	1/5			X	X									5							
311	25	25	1/6					X	X	X	X	X	X	X	X	6	X	X	X	X			
312	15	15	1/7			X	X			X	X	X	X	X	X	7							
313	15	15	1/8					X	X	X	X	X	X	X	X	8	X	X	X	X			
314	5	5	1/9			X	X			X	X					9							
315	5	5	1/10		X			X	X	X	X	X	X	X	X	10	X	X	X	X			
			11													11							
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Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17

Ship: CCGS Sir Wilfrid Laurier

Event # 74 UTC Date (ddmmmyy) 14 JUL 2016 Ice Coverage 0 /10 Water Depth(Sounder) 49 m +6m ship draft

Station: BCL-6C UTC Time 04:53 Weather/Sea State Clear, 6/16, 6/16 Sound Speed used by Sounder

CTD File: 201617-0 Lat (N) 64° 40.390 Lon (W) 170° 38.546 Watchkeeper(s) SV

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Comments
316	B-5	44	✓1					X	X	X	X	X	X	X	X	1	X	X	X	X			T = 1.134 @ 44m S = 32.725
317	35	35	✓2					X	X	X	X	X	X	X	X	2	X	X	X	X			
318	25	25	✓3					X	X	X	X	X	X	X	X	3	X	X	X	X			
319	15	15	✓4					X	X	X	X	X	X	X	X	4	X	X	X	X			
320	5	5	✓5					X	X	X	X	X	X	X	X	5	X	X	X	X			
			6													6							
			7													7							
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Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17 Ship: CCGS Sir Wilfrid Laurier

Event #80

Station:UTBS-5

CTD File:201617-0080

UTC Date (ddmmmyy)14 JUL 2016

Lat (N)64 40.873

Lon (W)169 55.988

Ice Coverage0/10

Weather/Sea State15 m sea

Water Depth(Sounder)49 m + 6m ship draft

Sound Speed used by Sounder1500

Watchkeeper(s)SZ / DW

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Comments
321	B-5	412	1			X	X			4/1000						1							T = .63
322	B-5	42	2	X						XXXX	X	X	X	X	X	2	X	X	X	X			S = 32.54
323	35	35	3			X	X									3							
324	35	35	4							XXXX	X	X	X	X	X	4	X	X	X	X			
325	25	25.6	5			X	X									5							
326	25	25.6	6							XXXX	XX	X	X	X	X	6	X	X	X	X		X	
327	15	14.5	7			X	X									7							
328	15	14.5	8							XXXX	X	X	XX	X	X	8	X	X	X	X			
329	5	4.8	9			X	X									9							
330	5	4.8	10	X						XXXX	X	XX	X	X	X	10	X	X	X	X			
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Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column

collected filtered samples first followed insured. by the unfiltered

sampled 322, changed filter then went to surface: 330, 328, 326, 324 in order on same filter. first rinsed tube (while attached to filter) 3x then let run for 30 to 60 seconds, then rinsed wad 3x, then took sample. -SZ

Rosette Log for IOS Cruise ID 2016-17 Ship: CCGS Sir Wilfrid Laurier

Event # 86 UTC Date (ddmmmyy) 14 JUL 2016 Ice Coverage 10 Water Depth(Sounder) 47m total 6m ship draft

Station: UTBS-2 UTC Time 1206 Weather/Sea State Wind 15 knots Sound Speed used by Sounder 1500

CTD File: 201617-0086 Lat (N) 64 40.830 Lon (W) 169 5.932 Watchkeeper(s) SE

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Bottom T : 0078 S : 32.215 Comments
331	B-5	40.5	✓	1				X	X	XXXX	X	X	X	X	X	1	X	X	X	X			
332	35	40.5	✓	2				X	X	XXXX	X	X	X	X	X	2	X	X	X	X			
333	35.25	35.6	✓	3				X	X	XXXX	X	X	X	X	X	3	X	X	X	X			
334	25.15	25.2	✓	4				X	X	XXXX	X	X	X	X	X	4	X	X	X	X		X	
335	15.5	15	✓	5				X	X	XXXX	X	X	X	X	X	5	X	X	X	X			
336	5	4.7	✓	6				X	X	XXXX	X	X	X	X	X	6	X	X	X	X			
				7												7							
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Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17

Ship: CCGS Sir Wilfrid Laurier

Event # 92 UTC Date (ddmmmyy) 14 Jul 2016 Ice Coverage 0/10 Water Depth(Sounder) 38 m ~~46~~ ship draft

Station: UTBS-2A UTC Time 15:39 Weather/Sea State Wind 10 knots Sound Speed used by Sounder

CTD File: 201617-0092 Lat (N) 64° 40.250 Lon (W) 168° 14.074 Watchkeeper(s) SV

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	1 ~ 2.6 5 ~ 31.99 } 34m Comments
337	B-5	34	✓1		XX					XX	X	X	XX	X	X	1	X	X	X	X			
338	25	25	✓2		XX					XX	XX	XX	X	X	X	2	X	X	X	X			
339	15	15	✓3							XX	X	X	X	X	X	3	X	X	X	X			
340	5	5	✓4		X					XX	X	X	X	X	X	4	X	X	X	X			
			5													5							
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Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.

T ~ 2.6

52 31.99

} 34m

Comments

Rosette Log for IOS Cruise ID 2016-17 Ship: CCGS Sir Wilfrid Laurier

Event # 97 UTC Date (ddmmmyy) 14 Jul 2016 Ice Coverage 0/10 Water Depth(Sounder) 46 m ship draft

Station: DBO2.7 UTC Time 1911 Weather/Sea State 16 knots Sound Speed used by Sounder

CTD File: 201617-0097 Lat (N) 65° 0.030 Lon (W) 168° 13.232 Watchkeeper(s)

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	TS 2.314 } @ 41m S = 31.989 } Comments
341	B-5	41	✓1					X	X	XX	X	X	XX	X	X	1	X	X	X	X			
342	35	35	✓2					X	X	XX	X	X	X	X	X	2	X	X	X	X			
343	25	25	✓3					X	X	XX	X	X	X	X	X	3	X	X	X	X			
344	15	15	✓4					X	X	XX	X	X	X	X	X	4	X	X	X	X			
345	5	5	✓5					X	X	XX	X	X	X	X	X	5	X	X	X	X			
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Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17 Ship: CCGS Sir Wilfrid Laurier

Event # 104 UTC Date (ddmmmyy) 14 JUL 2016 Ice Coverage 0/10 Water Depth(Sounder) 49 m ~~48~~ ship draft

Station: 0785-2 UTC Time 23:12 Weather/Sea State 16.5 knots Sound Speed used by Sounder

CTD File: 201617-0104 Lat (N) 64° 59.45' Lon (W) 169° 8.26' Watchkeeper(s)

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Bottom T: 0.040 } @ 44m S: 32.214 Comments	
346	13-5	44	✓	1		XX	XX									1								Vent open
347	13-5	44	✓	2				X	X	XXXX	X	X	Y	Y	X	2	X	X	X	X				Vent open
348	44	44	✓	3												3					X			Vent open
349	44	44	✓	4												4								Vent open
350	35	35	✓	5		XX	XX									5								
351	35	35	✓	6				X	X	XXXX	X	X	X	X	X	6	X	X	X	X				
352	35	35	✓	7												7								
353	35	35	✓	8												8								
354	25	25	✓	9	X✓	XX	XX									9								Vent open, sampled anyhow
355	25	25	✓	10						XXXX	X	X	X	X	X	10	X	X	X	X				
356	25	25	✓	11												11					X			
357	19	19	✓	12												12					X			
358	15	15	✓	13		X	X									13								Vent open
359	15	15	✓	14						XXXX	X	Y	X	X	X	14	X	X	X	X				
360	15	15	✓	15												15					X			
361	11	11	✓	16												16					X			
362	5	5	✓	17		XX	XX									17								Vent closed
363	5	5	✓	18						XXXX	X	X	X	X	X	18	X	X	X	X				
364	0	2	✓	19												19					X			
365	0	2	✓	20												20								
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Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.

Sarah was testing vents before cast... and Aiken didn't shut them after "Sorry!"

Rosette Log for IOS Cruise ID 2016-17

Ship: CCGS Sir Wilfrid Laurier

Event # 110

UTC Date (ddmmmyy) 15 JUL 2016

Ice Coverage 0/10

Water Depth(Sounder) 49 m (includes 5m ship draft)

Station: UTBS-4

UTC Time 0243

Weather/Sea State 19 4.0 6

Sound Speed used by Sounder 1500(?)

CTD File: 201617-0110

Lat (N) 64° 57.707

Lon (W) 169 53.156

Watchkeeper(s)

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Confirmed Fire	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Bottom Temperature: 44m Bottom Salinity: 32.736 PSU Comments
366	B-5	44	✓	1		X			X	X	XXXX	X	XX	X	X	X	1	X	X	X	X			
367	35	35	✓	2					X	X	XXXX	X	X	X	X	X	2	X	X	X	X			
368	25	25	✓	3					X	X	XXXX	X	X	X	X	X	3	X	X	X	X			
369	15	15	✓	4					X	X	XXXX	X	X	XX	X	X	4	X	X	X	X			
370	5	5	✓	5		X			X	X	XXXX	X	X	X	X	X	5	X	X	X	X			
				6													6							
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Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17 Ship: CCGS Sir Wilfrid Laurier

Event # 115 UTC Date (ddmmmyy) 15 Jul 2016 Ice Coverage 0/10 Water Depth(Sounder) 53 m (includes 5m ship draft)

Station: BRS-2 UTC Time 08:48 Weather/Sea State 23 4.0 5. Sound Speed used by Sounder

CTD File: 201617-0115 Lat (N) 65° 40.145 Lon (W) 168° 23.924 Watchkeeper(s)

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Confirmed Fire	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Comments
371	18.5	49	✓	1					X	X	XX XX	X	X	X	X	X	1	X	X	X	X			49m Bottom Temperature: 2.099 Bottom Salinity: 31.860
372	35	35	✓	2					X	X	XX XX	X	X	X	X	X	2	X	X	X	X			
373	25	25	✓	3					X	X	XX XX	X	X	X	X	X	3	X	X	X	X			
374	15	15	✓	4					X	X	XX XX	X	X	X	X	X	4	X	X	X	X			
375	5	5	✓	5					X	X	XX XX	X	X	X	X	X	5	X	X	X	X			
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Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17

Ship: CCGS Sir Wilfrid Laurier

Event # 117

UTC Date (ddmmmyyy) 15 Jul 2016

Ice Coverage 0/10

Water Depth(Sounder) 53 m (includes 5m ship draft)

Station: BRS-3

UTC Time 09:50

Weather/Sea State 204.6

Sound Speed used by Sounder

CTD File: 201617-0117

Lat (N) 65° 40.838

Lon (W) 168° 33.900

Watchkeeper(s)

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Confirmed Fire	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Bottom Temperature: 1.934 °C Bottom Salinity: 32.046 Comments
376	B-5	48	✓	1		X	X	X									1							
377	B-5	48	✓	2		X			X	X	X	X	X	X	X	X	2	X	X	X	X			
378	35	35	✓	3		X	X	X			X						3							
379	35	35	✓	4					X	X	X	X	X	X	X	X	4	X	X	X	X			
380	25	25	✓	5		X	X	X									5							
381	25	25	✓	6					X	X	X	X	X	X	X	X	6	X	X	X	X			
382	15	15	✓	7		X	X	X									7							
383	15	15	✓	8					X	X	X	X	X	X	X	X	8	X	X	X	X			
384	5	5	✓	9			X	X									9							
385	5	5	✓	10		X		X	X	X	X	X	X	X	X	X	10	X	X	X	X			
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Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17 Ship: CCGS Sir Wilfrid Laurier

Event # 119 UTC Date (ddmmmyy) 15 JUL 2016 Ice Coverage ___/10 Water Depth(Sounder) 52 m (includes 5m ship draft)

Station: RS-4 UTC Time 10:50 Weather/Sea State 25 km/h

CTD File: 201617-0119 Lat (N) 65° 42.000 Lon (W) 168° 42.706 Watchkeeper(s) _____

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Confirmed Fire	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Comments
386	13-15	47	✓	1					X	X	X	X	X	X	X	X	1	X	X	X	X			47m Bottom Temperature: 1.689 Bottom Salinity: 32.040
387	35	35	✓	2					X	X	X	X	X	X	X	X	2	X	X	X	X			
388	25	25	✓	3					X	X	X	X	X	X	X	X	3	X	X	X	X			
389	15	15	✓	4					X	X	X	X	X	X	X	X	4	X	X	X	X			
390	5	5	✓	5					X	X	X	X	X	X	X	X	5	X	X	X	X			
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Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17

Ship: CCGS Sir Wilfrid Laurier

Event #121

Station: UTN-1

CTD File: 201617-0121

UTC Date (ddmmYYYY)15 Jul 2016

UTC Time16:46

Lat (N)66°42.600

Lon (W)168°23.833

Ice Coverage10

Weather/Sea State194.6 knots

Water Depth(Sounder)35m (includes 5m ship draft)

Sound Speed used by Sounder

Watchkeeper(s)

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Confirmed Fire	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Bottom Temperature: 3.034 Bottom Salinity: 31.961 Comments
391	8-5	30	✓	1		X			X	X	XXXX	X	X	X	X	X	1	X	X	X	X			
392	2-5	25	✓	2					X	X	XXXX	X	X	X	X	X	2	X	X	X	X			
393	1-5	14.5	✓	3					X	X	XXXX	X	X	X	X	X	3	X	X	X	X			
394	5	5	✓	4		X			X	X	XXXX	X	X	X	X	X	4	X	X	X	X			
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Bottle Integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17 Ship: CCGS Sir Wilfrid Laurier

Event # 126 UTC Date (ddmmmyy) 15 Jul 2016 Ice Coverage 0/10 Water Depth(Sounder) 46 m (includes 5m ship draft)

Station: UTV-2 UTC Time 20:36 Weather/Sea State 14k-6 Sound Speed used by Sounder 1500 m/s

CTD File: 201617-0126 Lat (N) 67° 2.990 Lon (W) 168° 43.628 Watchkeeper(s)

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Confirmed Fire	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Bottom Temperature: 2.045 °C Bottom Salinity: 32.209 PSU Comments
395	B-5	41	✓	1			XX	XX									1							
396	B-5	41	✓	2					X	X	XXXX	X	X	X	X	X	2	X	X	X	X			
397	35	35	✓	3			XX	XX									3							
398	35	35	✓	4					X	X	XXXX	X	X	X	X	X	4	X	X	X	X			X
399	25	25	✓	5			XX	XX									5							
400	25	25	✓	6					X	X	XXXX	X	X	X	X	X	6	X	X	X	X			
401	15	15	✓	7			XX	XX									7							
402	15	15	✓	8					X	X	XXXX	X	X	X	X	X	8	X	X	X	X			
403	5	5	✓	9			XX	XX									9							
404	5	5	✓	10					X	X	XXXX	X	X	X	X	X	10	X	X	X	X			
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Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17 Ship: CCGS Sir Wilfrid Laurier

Event # 132 UTC Date (ddmmmyyy) 16 JUL 2016 Ice Coverage 0/10 Water Depth(Sounder) 50 m (includes 5m ship draft)

Station: UTV-3 UTC Time 00:41 Weather/Sea State 13 km/h, Sunny Sound Speed used by Sounder

CTD File: 201617-0132 Lat (N) 67° 19.847 Lon (W) 168° 57.05 Watchkeeper(s)

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Confirmed Fire	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Bottom Temperature: 1.058 Bottom Salinity: 32.709 Comments
405	B-5	46	✓	1					X	X	XXXX	X	X	X	X	X	1	X	X	X	X			
406	35	35	✓	2					X	X	XXXX	XX	XX	XX	X	X	2	X	X	X	X			
407	25	25	✓	3					X	X	XXXX	X	X	X	X	X	3	X	X	X	X			
408	15	15	✓	4					X	X	XXXX	X	X	X	X	X	4	X	X	X	X			
409	5	5	✓	5					X	X	XXXX	X	X	X	X	X	5	X	X	X	X			
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Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17 Ship: CCGS Sir Wilfrid Laurier

Event # 137

Station: UTV-4

CTD File: 201617-0137

UTC Date (ddmmmyyy) 16 Jul 2016

UTC Time 03:04

Lat (N) 67° 29.9'0"

Lon (W) 168° 54'40.3"

Ice Coverage 100%

Weather/Sea State 56kts, sunny

Water Depth(Sounder) 50 m (includes 5m ship draft)

Sound Speed used by Sounder

Watchkeeper(s)

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Confirmed Fire	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Bottom Temperature: 1.273 Bottom Salinity: 32.551 Comments	
410	B-5	45	✓	1			X X	X X									1								
411	B-5	45	✓	2					X	X	X X X	X	X	X	X	X	2	X	X		X				
412	B-5	45	✓	3													3					X X			
413	B-5	45	✓	4													4					X			
414	35	35	✓	5			X X	X X									5								
415	35	35	✓	6					X	X	X X X	X	X	X	X	X	6	X	X	X	X				
416	35	35	✓	7													7					X X			
417	25	25	✓	8													8								
418	25	25	✓	9			X	X									9								
419	25	25	✓	10					X	X	X X X	X	X	X	X	X	10	X	X	X	X				
420	20	20	✓	11													11					X X			
421	15	15	✓	12													12					X			
422	15	15	✓	13			X X	X X									13								
423	15	15	✓	14					X	X	X X X	X	X	X	X	X	14	X	X	X	X				
424	10	10	✓	15													15					X			
425	5	5	✓	16													16					X			
426	5	5	✓	17			X X	X X									17								
427	5	5	✓	18					X	X	X X X	X	X	X	X	X	18	X	X	X	X				
428	0	2	✓	19													19					X X			
429	0	2	✓	20													20								
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Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17 Ship: CCGS Sir Wilfrid Laurier

Event # 142 UTC Date (ddmmmyy) 16 JUL 2016 Ice Coverage 0/10 Water Depth(Sounder) 35 m (includes 5m ship draft)

Station: SEC-B UTC Time 17:09 Weather/Sea State 18 knots, Clear Sound Speed used by Sounder

CTD File: 201617-0142 Lat (N) 68° 17.280 Lon (W) 166° 56.320 Watchkeeper(s)

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Confirmed Fire	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Bottom Temperature: 5.472 Bottom Salinity: 30.970 Comments
430	B-5	31	✓	1		X			X	X	XXXX	X	X	X	X	X	1	X	X	X	X			
431	25	24	✓	2					X	X	XXXX	X	X	X	X	X	2	X	X	X	X			
432	15	15	✓	3					X	X	XXXX	X	X	X	X	X	3	X	X	X	X			
433	5	5	✓	4		X			X	X	XXXX	X	X	X	X	X	4	X	X	X	X			
				5													5							
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Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17 Ship: CCGS Sir Wilfrid Laurier

Event # 147 UTC Date (ddmmmyyy) 16 Jul 2016 Ice Coverage 0/10 Water Depth(Sounder) 43 m (includes 5m ship draft)

Station: SEC-7 UTC Time 19:11 Weather/Sea State 224-8 C/cu Sound Speed used by Sounder

CTD File: 201617-0147 Lat (N) 68° 14.706 Lon (W) 167° 7.050 Watchkeeper(s)

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Confirmed Fire	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Bottom Temperature: 38m Bottom Salinity: 31.646 PSU Comments
434	B-5	38	✓	1			X	X									1							
435	B-5	38	✓	2		X			X	X	XXX	X	X	X	X	X	2	X	X	X	X			
436	35	35	✓	3			XX	XX									3							
437	35	35	✓	4					X	X	XXX	X	X	X	X	X	4	X	X	X	X			
438	25	25	✓	5			XX	XX									5							
439	25	25	✓	6					X	X	XXX	X	X	X	X	X	6	X	X	X	X			
440	15	15	✓	7			XX	XX									7							
441	15	15	✓	8					X	X	XXX	X	X	X	X	X	8	X	X	X	X			
442	5	5	✓	9			XX	XX									9							
443	5	5	✓	10		X			X	X	XXX	X	X	X	X	X	10	X	X	X	X			
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Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17 Ship: CCGS Sir Wilfrid Laurier

Event #152

Station: SEC-6

CTD File: 201617-0

UTC Date (ddmmYYYY)16 JUL 2016

UTC Time20:52

Lat (N)68° 11.17'

Ice Coverage0/10

Weather/Sea State18 knots Clear

Lon (W)167° 18.550

Water Depth(Sounder)48 m (includes 5m ship draft)

Sound Speed used by Sounder

Watchkeeper(s)

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Confirmed Fire	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Bottom Temperature: 44m Bottom Salinity: 31.778 Comments
444	35	44	✓	1		X			X	X	XXXX	X	X	X	X	X	1	X	X	X	X			
445	35	35	✓	2					X	X	XXXX	X	X	X	X	X	2	X	X	X	X			
446	25	25	✓	3					X	X	XXXX	X	X	X	X	X	3	X	X	X	X			
447	15	15	✓	4					X	X	XXXX	X	X	X	X	X	4	X	X	X	X			
448	5	5	✓	5		X			X	X	XXXX	X	X	X	X	X	5	X	X	X	X			
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Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17 Ship: CCGS Sir Wilfrid Laurier

Event # 158

Station: SEC-5

CTD File: 201617-0158

UTC Date (ddmmmyyy) 16 Jul 2016

UTC Time 22:43

Lat (N) 68° 7.800

Ice Coverage 0/10

Weather/Sea State 18 knots, clear

Lon (W) 167° 29.640

Water Depth(Sounder) 50 m (includes 5m ship draft)

Sound Speed used by Sounder

Watchkeeper(s)

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Confirmed Fire	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Bottom Temperature: 4.848 Bottom Salinity: 31.892 Comments
449	B-5	46	✓	1			X	X									1							
450	B-5	46	✓	2		X			X	X	X	X	X	X	X	X	2	X	X	X	X			
451	35	35	✓	3			X										3							
452	35	35	✓	4					X	X	X	X	X	X	X	X	4	X	X	X				
453	25	25	✓	5			X	X									5							
454	25	25	✓	6					X	X	X	X	X	X	X	X	6	X	X	X				
455	15	15	✓	7			X	X									7							
456	15	15	✓	8					X	X	X	X	X	X	X	X	8	X	X	X				
457	5	5	✓	9			X	X									9							
458	5	5	✓	10		X			X	X	X	X	X	X	X	X	10	X	X	X				
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Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17 Ship: CCGS Sir Wilfrid Laurier

Event # 163 UTC Date (ddmmmyyy) 17 Jul 2016 Ice Coverage 0/10 Water Depth(Sounder) 53 m (includes 5m ship draft)

Station: SEC-4 UTC Time 00:53 Weather/Sea State 15 k-6, c/c

CTD File: 201617-0163 Lat (N) 68° 0.840 Lon (W) 167° 51.966 Watchkeeper(s)

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Confirmed Fire	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Bottom Temperature: 2.813 Bottom Salinity: 32.057 Comments
459	8.5	48	✓	1		X			X	X	XXXX	X	X	X	X	X	1	X	X	X	X			
460	35	35	✓	2					X	X	XXXX	X	X	X	X	X	2	X	X	X	X			
461	25	25	✓	3					X	X	XXXX	X	X	X	X	X	3	X	X	X	X			
462	15	15	✓	4					X	X	XXXX	X	X	X	X	X	4	X	X	X	X			
463	5	5	✓	5		X			X	X	XXXX	X	X	X	X	X	5	X	X	X	X			
				6													6							
				7													7							
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Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17 Ship: CCGS Sir Wilfrid Laurier

Event # 168 UTC Date (ddmmmyy) 17 Jul 2016 Ice Coverage 1/10 Water Depth(Sounder) 59 m (includes 5m ship draft)

Station: SEC-3 UTC Time 03:58 Weather/Sea State 17 kts, clear Sound Speed used by Sounder

CTD File: 201617-0 Lat (N) 67° 53.975 Lon (W) 168° 13.970 Watchkeeper(s)

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Confirmed Fire	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Bottom Temperature: 0.926 Bottom Salinity: 32.634 Comments
464	8-5	54	✓	1			XX	XX									1							54m
465	8-5	54	✓	2		XX			X	X	XXXX	X	X	X	X	X	2	X	X	X	X			
466	35	35	✓	3			XX	XX									3							
467	35	35	✓	4					X	X	XXXX	X	X	X	X	X	4	X	X	X	X			
468	25	25	✓	5			XX	XX									5							
469	25	25	✓	6					X	X	XXXX	X	X	X	X	X	6	X	X	X	X			
470	15	15	✓	7			X	X									7							
471	15	15	✓	8					X	X	XXXX	XX	XX	XX	X	X	8	X	X	X	X			
472	5	5	✓	9			XX	XX									9							
473	5	5	✓	10		X			X	X	XXXX	X	X	X	X	X	10	X	X	X	X			
				11													11							
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Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17 Ship: CCGS Sir Wilfrid Laurier

Event # 173 UTC Date (ddmmmyy) 17 Jul 2016 Ice Coverage 0/10 Water Depth(Sounder) 51 m (includes 5m ship draft)

Station: UTM-6 UTC Time 06:56 Weather/Sea State 16 knots, 5 seas Sound Speed used by Sounder

CTD File: 201617-0173 Lat (N) 67° 44.316 Lon (W) 168 26.077 Watchkeeper(s)

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Confirmed Fire	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Bottom Temperature: 0.995 Bottom Salinity: 32.634 Comments
474	B-5	46	✓	1		X	X	X		X	X	X	X	X	X	X	1	X	X	X				46m
475	B-5	46	✓	2		X			X	X	X	X	X	X	X	X	2	X	X	X				
476	35	35	✓	3			X	X					X				3							
477	35	35	✓	4			X	X	X	X	X	X	X	X	X	X	4	X	X	X	X			
478	25	25	✓	5			X	X		X	X	X	X	X	X	X	5							
479	25	25	✓	6					X	X	X	X	X	X	X	X	6	X	X	X	X			
480	15	15	✓	7			X	X		X	X	X	X	X	X	X	7	X	X	X	X			
481	15	15	✓	8			X	X	X	X	X	X	X	X	X	X	8	X	X	X	X			
482	5	5	✓	9			X	X			X	X	X	X	X	X	9							
483	5	5	✓	10		X			X	X	X	X	X	X	X	X	10	X	X	X	X			
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Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17 Ship: CCGS Sir Wilfrid Laurier

Event # 178 UTC Date (ddmmmyy) 17 JUL 2016 Ice Coverage /10 Water Depth(Sounder) 51 m (includes 5m ship draft)

Station: SEC-2 UTC Time 08:40 Weather/Sea State 15 knots, Rain Sound Speed used by Sounder

CTD File: 201617-0178 Lat (N) 67° 47.008 Lon (W) 168° 36.096 Watchkeeper(s)

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Confirmed Fire	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Bottom Temperature: 1.041 Bottom Salinity: 32.640 Comments
484	B-5	46	✓	1					X	X	XXXX	X	X	X	X	X	1			X	X			46m
485	B-5	46	✓	2		X			X	X	XXXX	X	X	X	X	X	2	X	X	X	X			
486	35	35	✓	3					X	X	XXXX	X	X	X	X	X	3	X	X	X	X			
487	25	25	✓	4					X	X	XXXX	X	X	X	X	X	4	X	X	X	X			
488	15	15	✓	5					X	✓	XXXX	X	X	X	X	X	5	X	X	X	X			
489	5	5	✓	6		X			X	X	XXXX	XX	XX	XX	X	X	6	X	X	X	X			
				7													7							
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Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17 Ship: CCGS Sir Wilfrid Laurier

Event # 183 UTC Date (ddmmmyy) 17 JUL 2016 Ice Coverage 0/10 Water Depth(Sounder) 51 m (includes 5m ship draft)

Station: SEC-1 UTC Time 11:00 Weather/Sea State 10 k-b, bcny Sound Speed used by Sounder

CTD File: 201617-0183 Lat (N) 67° 40.246 Lon (W) 163° 57.629 Watchkeeper(s)

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Confirmed Fire	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Bottom Temperature: 46m Bottom Salinity: 32.665 Comments
490	B-5	46	✓	1			X	X				X	X	X	X	X	1	X	X	X				
491	B-5	46	✓	2	X				X	X	✓✓✓	X	X	X	X	X	2	X	X	X				
492	35	35	✓	3			X	X									3							
493	35	35	✓	4					X	X	✓✓✓	X	X	X	X	X	4	X	X	X				
494	25	25	✓	5			X	X									5							
495	25	25	✓	6					X	X	✓✓✓	X	X	X	X	X	6	X	X	X				
496	15	15	✓	7			X	X									7							
497	15	15	✓	8					X	X	✓✓✓	X	X	X	X	X	8	X	X	X			X	
498	5	5	✓	9			X	X									9							
499	5	5	✓	10	X				X	X	✓✓✓	X	X	X	X	X	10	X	X	X				
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Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17

Ship: CCGS Sir Wilfrid Laurier

Event # 188

UTC Date (ddmmmyy) 17 JUL 2016

Ice Coverage 0/10

Water Depth(Sounder) 60 m (includes 5m ship draft)

Station: UTM-7

UTC Time 1417

Weather/Sea State 7 kts, 1 m/slow

Sound Speed used by Sounder 1500

CTD File: 201617-0188.hex

Lat (N) 68 0.030

Lon (W) 168 55.856

Watchkeeper(s) SE

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Confirmed Fire	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Bottom Temperature: 0.517 Bottom Salinity: 32.750 Comments	
500	B-5	52.6	✓	1					X	X	X/X/X	X	X	X	X	X	1	X	X	X	X				
501	50	49.6	✓	2					X	X	X/X/X	X	X	X	X	X	2	X	X	X	X				
502	35	34.3	✓	3					X	X	X/X/X	X/X	X/X	X/X	X	X	3	X	X	X	X				
503	25	25.6	✓	4					X	X	X/X/X	X	X	X	X	X	4	X	X	X	X				
504	15	14.6	✓	5					X	X	X/X/X	X	X	X	X	X	5	X	X	X	X				
505	5	4.6	✓	6					X	X	X/X/X	X	X	X	X	X	6	X	X	X	X				
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Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17 Ship: CCGS Sir Wilfrid Laurier

Event # 193 UTC Date (ddmmmyy) 18 Jul 2016 Ice Coverage 0/10 Water Depth(Sounder) 46 m (includes 5m ship draft)

Station: DBO 4.1 UTC Time 16:11 Weather/Sea State 17 Swb 4,3,7 Sound Speed used by Sounder

CTD File: 201617-0193_hex Lat (N) 70° 58.434 Lon (W) 161° 53.616 Watchkeeper(s)

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Confirmed Fire	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Comments
506	13-5	41.5	✓	1			XX	XX									1							41.5m Bottom Temperature: -1.533 Bottom Salinity: 32.359
507	13-5	41.5	✓	2		X			X	X	6	X	X	X	X	X	2	X	X	X	X			
508	35	35	✓	3			XX	XY									3							
509	35	35	✓	4					X	X	6	X	X	X	X	X	4	X	X	X	X			X
510	25	25	✓	5			XX	XX									5							
511	25	25	✓	6					X	X	6	X	X	X	X	X	6	X	X	X	X			
512	15	15	✓	7			XX	XY									7							
513	15	15	✓	8					X	X	6	X	X	X	X	X	8	X	X	X	X			
514	5	5	✓	9			XX	XX									9							
515	5	5	✓	10		X			X	X	6	X	X	X	X	X	10	X	X	X	X			
				11													11							Notion ts? Niskin
				12													12							6 samples / Niskin
				13													13							
				14													14							2x cm Filtered
				15													15							2x Filtered "Up"
				16													16							from # 2 → 10
				17													17							
				18													18							2x Filtered "Down"
				19													19							from # 10 → # 2
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Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17 Ship: CCGS Sir Wilfrid Laurier

Event # 199 UTC Date (ddmmYYYY) 18 JUL 2016 Ice Coverage 3/10

Station: DBO-4.2 UTC Time 1949 Weather/Sea State 12 knots clear

CTD File: 201617-0 Lat (N) 71.6.070 Lon (W) 162.15.826

Water Depth(Sounder) 48 m (includes 5m ship draft)
Sound Speed used by Sounder
Watchkeeper(s)

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Confirmed Fire	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Bottom Temperature: ~1.637 Bottom Salinity: 32.236 Comments	
516	B-5	43	✓	1		X			X	X	XXXX	X	X	X	X	X	1	X	X	X	X				
517	B-5	43	✓	2													2					X			
518	39-	39	✓	3													3								
519	35	35	✓	4					X	X	444	X	X	X	X	X	4	X	X	X	X	X			
520	35	35	✓	5													5					X			
521	32	32	✓	6													6					X			
522	25	25	✓	7					X	X	444	X	X	X	X	X	7	X	X	X	X		X		
523	25	25	✓	8													8								
524	25	25	✓	9													9					X			
525	15	15	✓	10					X	X	444	X	X	X	X	X	10	X	X	X	X				
526	15	15	✓	11													11					X			
527	10	10	✓	12													12					X			
528	5	5	✓	13		X				X	444	X	X	X	X	X	13	X	X	X	X				
529	5	5	✓	14													14					X			
530	0		✓	15													15					X			
531	0		✓	16													16					X			
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2x cm filtered

2x filtered sampled "up"

from Niskin #1 → 13

w/ same filters

2x filtered "down"

from Niskin #13 → #1

w/ same filters

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17 Ship: CCGS Sir Wilfrid Laurier

Event # 204 UTC Date (ddmmmyy) 19 Jul 2016 Ice Coverage 2/10

Station: DB0-4.3 UTC Time 1505 Weather/Sea State 04-4 SUR

CTD File: 201617-0 Lat (N) 71° 14.077 Lon (W) 162° 38.563

Water Depth(Sounder) 47 m (includes 5m ship draft)

Sound Speed used by Sounder

Watchkeeper(s)

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Confirmed Fire	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Bottom Temperature: 42m Bottom Salinity: 32.260 Comments
532	B-5	42	✓	1			XX	XX		X	X		X	X	X	X	1	X	X	X				
533	B-5	42	✓	2		X			X	X	6X	X	X	X	X	X	2	X	X	X	X			
534	35	35	✓	3			XX	XX		X			X	X	X	X	3	X	X	X	X			
535	35	35	✓	4					X	X	6X	XX	XX	XX	X	X	4	X	X	X	X			
536	25	25	✓	5			XX	XX									5							
537	25	25	✓	6					X	X	6X	X	X	X	X	X	6	X	X	X	X		X	
538	15	15	✓	7			XX	XX									7							
539	15	15	✓	8					X	X	6X	X	X	X	X	X	8	X	X	X	X			
540	5	5	✓	9			XX	XX									9							
541	5	5	✓	10		X			X	X	6X	X	X	X	X	X	10	X	X	X	X			
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Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.

Rosette Log for IOS Cruise ID 2016-17 Ship: CCGS Sir Wilfrid Laurier

Event # 209 UTC Date (ddmmmyyy) 20 JUL 2016 Ice Coverage 0/10 Water Depth(Sounder) 42 m (includes 5m ship draft)

Station: D B04.6 UTC Time 0045 Weather/Sea State 15 knots Sound Speed used by Sounder

CTD File: 201617-0 Lat (N) 71° 37.651 Lon (W) 163 46.775 Watchkeeper(s)

Samp #	Target Pressure (db)	Confirmed Pressure (db)	Confirmed Fire	Niskin #	Bottle Integrity	DIC/Alk (Vagle)	N2O (Tortell)	CH4(Tortell)	CDOM (Frey)	FDOM (Frey)	Nutrient (Vagle)	Salinity (Vagle)	O-18 (Vagle)	Barium (Vagle)	Chl-a Total (Cooper)	Nutrient (Cooper)	Niskin #	O-18 (Cooper)	SPM (Frey)	Chl-a/Phaeo Total (Frey)	Phyto-ID (Varela)	Phyto Product (Varela)	Chl-a Total (Kedra)	Bottom Temperature: ~1.651 Bottom Salinity: 32.126 Comments
542	B-5	38	✓	1		X			X	X	X	X	X	X	X	X	1	X	X	X			X	
543	35	35	✓	2					X	X	X	X	X	X	X	X	2	X	X	X				
544	25	25	✓	3					X	X	X	X	X	X	X	X	3	X	X	X				
545	15	15	✓	4					X	X	X	X	X	X	X	X	4	X	X	X				
546	5	5	✓	5		X			X	X	X	X	X	X	X	X	5	X	X	X				
				6													6							
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Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.